

WMD Radiological/Nuclear Course for HazMat Technicians (PER-241)

Course Description

A U.S. Department of Homeland Security (DHS) Office for Domestic Preparedness (ODP) training course delivered by the U.S. Department of Energy, National Nuclear Security Administration, Nevada Site Office (DOE/NNSA/NSO), National Center for Exercise Excellence (NCEE), at the Nevada Test Site (NTS), a member of the National Domestic Preparedness Consortium (NDPC) through Bechtel Nevada (BN), Counter Terrorism Operations Support (CTOS) Program.

Course Description:

The course prepares the hazardous materials (HazMat) technician to respond to an incident involving a radiological or nuclear weapon of mass destruction (WMD), such as a Radiological Dispersal Device (RDD, "Dirty Bomb") or an Improvised Nuclear Device (IND). The course begins by giving the student a conscious awareness of the fundamentals of radiation, health effects, recognition, and terrorist use of radiation and radiological material. HazMat technicians are given hands-on experience with radiation fields while learning the basic operation of radiation detectors and dosimeters. Students are taught how to use these instruments to conduct surveys of personnel, vehicles, facilities, and outdoor areas. Hands-on activities blend cognitive knowledge of radiation and instruments with survey techniques used in detecting the presence of radiation, locating radioactive material, and measuring levels of radiation and radiological contamination. Once individual and small team skills are mastered, HazMat technicians are taught operational considerations when responding to a radiological WMD incident. These considerations include operating in high radiation areas, limiting responder radiation doses, and rescuing contaminated victims. Students form operational teams that deal with cadre-evaluated realistic drills involving likely terrorist use of radiological material. The course culminates with an evaluation exercise requiring student teams, under a unified command, to respond to a terrorist attack on a facility, disbursing radiological material.

Course Length:

32 hours (four 8-hour days)

Prerequisites:

Students must be State-Certified Hazardous Materials Technicians.

Target Audience/Disciplines:

The target audience includes students with technician-level training, representing the following disciplines:

- Law Enforcement
- Emergency Medical Services
- Emergency Management Agency
- Fire Service
- Hazardous Materials (HazMat)
- Public Works
- Governmental Administrative
- Public Safety Communications

Target Audience/Disciplines (Cont.):

- Health Care
- Public Health
- Other Skilled Support Personnel that provide immediate support services during prevention, response, and recovery operations.

Certificate:

Certificates of Completion are issued by the DOE/NNSA, National Center for Exercise Excellence, Nevada Test Site. Continuing Education Units (CEUs) are awarded by the University of Nevada, Las Vegas (UNLV).

Eligibility:

This course is primarily intended for responders trained to the HazMat Technician Level. It is the responsibility of the jurisdiction to select course participants.

Course Delivery:

Delivered at the U.S. Department of Energy, National Center for Exercise Excellence, Nevada Test Site.

Cost:

All training and course materials are free to eligible participants.

Registration:

Bechtel Nevada requires on-line registration (see note**). Before you "send form to CTOS" you must print a hard copy, provide signatures, and fax to your State POC for approval.

WASHINGTON STATE POC:

Rosanne Garrand, r.garrand@emd.wa.gov
(253) 512-7048 phone
(253) 512-7206 fax

*NOTE: ** Your on-line registration information will be placed in a pending "data file" until CTOS receives the State POC signed/approved copy.*

Contact:

In order to attend a training class delivered by one of the ODP training partners, a request must be provided to the designated training point of contact. For the Training Coordinator in your area, please contact the ODP Help Line at: 800-368-6498.

For more specific information regarding this course, please contact the following:

Registration Desk, Bechtel Nevada
Counter Terrorism Operations Support (CTOS) Program
DOE/NNSA/NSO
P.O. Box 98521, M/S CF126
Las Vegas, NV 89198-8521
(Tel) 702-295-3224, (Fax) 702-537-2639
Email: CTOSREG@nv.doe.gov

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Course Syllabus

A U.S. Department of Homeland Security (DHS) Office for Domestic Preparedness (ODP) training course delivered by the U.S. Department of Energy, National Nuclear Security Administration, Nevada Site Office (DOE/NNSA/NSO), National Center for Exercise Excellence (NCEE), at the Nevada Test Site (NTS), a member of the National Domestic Preparedness Consortium (NDPC) through Bechtel Nevada (BN), Counter Terrorism Operations Support (CTOS) Program.

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Course Topics:

Fundamentals of Radiation
Health Effects of Radiation
Minimizing Exposure
Recognition of Radioactive Material and WMD
Radiological Material Transportation
Radiological Hazard Assessment
Radiological/Nuclear WMD Threat
Radiation Dosimeters
Gamma Exposure Measurements
Contamination Measurements
Personnel Survey Techniques
Vehicle Survey Techniques
Facility and Area Survey Techniques
Radiological Decontamination
Team Operations at a Radioactive Hot Zone

Course Objectives:

1. Describe the radiological/nuclear threat of WMD and its potential impact on the community.
2. Discuss responsibilities for maintaining exposures to radiation and radioactive material As Low As Reasonably Achievable (ALARA).
3. Explain the health effects of ionizing radiation and operational considerations for HazMat technicians and victims in a WMD radiological/nuclear incident.
4. Apply time, distance, and shielding concepts to reduce exposure while operating in a radiation environment.
5. Operate a variety of radiological instruments to determine the presence and quantity of radiation.
6. Use survey techniques to determine radiological hazards and to make tactical decisions.
7. Describe the design and construction features of containers used for radiological/nuclear material.
8. Describe the issues and considerations associated with managing large-scale radiological/nuclear incidents and apply them to large-scale scenarios.
9. Conduct personnel and equipment decontamination, given a radiological WMD scenario.
10. Describe the effects of a radiological dispersal device (RDD).
11. Formulate the basic tactical procedures for handling a WMD radiological/nuclear incident.

Realistic Training:

This is a "live agent" course that extensively uses real radioactive material. The course is designed and monitored so that students only receive a minor radiation dosage (lower than a chest x-ray or a typical round-trip airline flight across the U.S.); however, radiation levels are sufficient to practice the techniques needed in a real incident involving much higher radiation levels. On the first day of class, each student is issued a radiation meter kit (containing three different types of detectors) and an electronic dosimeter; these are used throughout the course. Students practice with real radioactive material in the classroom, during drills and exercises in venues with more than 75 alpha, beta, beta-gamma, and gamma radiation sources in place. Exercise areas can be configured with thousands of square feet with elevated radiation levels.

WMD Radiological/Nuclear Course for HazMat Technicians (PER-241)

Course Syllabus (continued)

Realistic Training (Cont.):

Students are allowed into radiation fields up to a maximum of 5 mrem per hour (or about 500 to 1,000 times greater than natural background radiation levels). One exercise area includes a former nuclear facility used for testing air-breathing jet engines powered by nuclear reactors. Another exercise area was constructed at ground zero of four nuclear detonations. In 1955, a nuclear device was detonated in a tower above the houses, office buildings, and industrial areas in a simulated town. This exercise area now includes a downtown area (with bus and detonated car "dirty bomb"), strip mall, industrial business area, train station (track destroyed and cars derailed), semi-tractor trailers and car incidents, an airfield (with a detonated truck "dirty bomb"), and a crashed jet liner. The radioactive material that remains in the ground from the nuclear detonation produces radiation levels throughout the exercise area that are higher than normal background levels, yet safe. This allows students to train in an area with simulated widespread radiological contamination from an RDD or IND, without the risks of contaminating themselves.

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Registration Desk

Bechtel Nevada

Counter Terrorism Operations Support (CTOS) Program

DOE/NNSA/NSO

P. O. Box 98521, M/S CF126

Las Vegas, NV 89193-8521

(Tel) 702-295-3224

(Fax) 702-537-2639

Email: CTOSREG@nv.doe.gov

More information can be found at the DOE/NNSA/NSO

Web site: www.nv.doe.gov/combatingterrorism.



CTOS



Weapons of Mass Destruction Training Program

Sponsored by Department of Homeland Security (DHS) Office for Domestic Preparedness (ODP)
Delivered by Bechtel Nevada Counter Terrorism Operations Support (CTOS)

Course Name: Course 1: PER-241
Class Date: (1st Choice) (2nd Choice) Course 2:
Location: Course 3:

PART I: COURSE REGISTRATION INFORMATION

Your name will appear on your certificate as it appears below. Please Print Characters In Capital Letters Only Using Black Ink.

Last Name:
Middle:
First Name:
Agency/ Company Name:
Job Title/ Position:

Are you a Federal employee? ☐ Yes ☐ No

Are you a US citizen? ☐ Yes ☐ No

DOB (MM-DD-YYYY):

Social Security No.:

Place of Birth: City: State:

Work Address:

City: State: ZIP:

Work Phone #: Fax #:

Home Address:

City: State: ZIP:

Home Phone #: +

County:

Email Address:

TYPE OF DEPARTMENT/AGENCY			
(Bubble in the <u>ONE</u> item that is most similar to the agency/company you noted above. Completely fill in the bubble):			
<input type="radio"/> Airport Authority (PO)	<input type="radio"/> National Guard (U)	<input type="radio"/> Ranger Station (N)	<input type="radio"/> Other Government Agency (G)
<input type="radio"/> Ambulance Service (A)	<input type="radio"/> Police Department (D)	<input type="radio"/> Rescue Squad (R)	<input type="radio"/> Local Level (LL)
<input type="radio"/> Emergency Management Agency (E)	<input type="radio"/> Port Authority (RT)	<input type="radio"/> Search and Rescue (C)	<input type="radio"/> Federal Level (FL)
<input type="radio"/> Emergency Medical/EMS (S)	<input type="radio"/> Private Industry/Sector (I)	<input type="radio"/> Sheriff's Office (FF)	<input type="radio"/> State Level (SL)
<input type="radio"/> Fire Department (F)	<input type="radio"/> Public Health (P)	<input type="radio"/> State Police (SP)	<input type="radio"/> University (UN)
<input type="radio"/> Hospital (H)	<input type="radio"/> Public Works (W)	<input type="radio"/> Volunteer Fire Department (V)	

TYPE OF JURISDICTION:		(Indicate additional jurisdiction information, Bubble <u>ONE</u> from the list below):	
(Bubble in the <u>ONE</u> item best describing your agency's affiliation):			
<input type="radio"/> City/Township (C)	<input type="radio"/> District of Columbia (D)	<input type="radio"/> Region (G)	<input type="radio"/> Port (P) <input type="radio"/> Tribal Territory (R)
<input type="radio"/> County/Parish (U)	<input type="radio"/> US Territory (T)	<input type="radio"/> Metro (M)	<input type="radio"/> Federal (F)
<input type="radio"/> State (S)	<input type="radio"/> Private Sector (O)	<input type="radio"/> National (N)	<input type="radio"/> Airport (I)

*NOTE: Military personnel should bubble "District of Columbia" in the first column and "Federal" in the second column

What is your primary job duty?			
(Please bubble the <u>ONE</u> that most closely corresponds with your primary job duties; for example if you work for the Water Department, Bubble <u>Public Works</u>):			
<input type="radio"/> Disaster Board Member (I)	<input type="radio"/> HazMat (H)	<input type="radio"/> Law Enforcement (L)	<input type="radio"/> Private Sector (V)
<input type="radio"/> Elected Official (B)	<input type="radio"/> Search & Rescue (R)	<input type="radio"/> Military (M)	<input type="radio"/> Public Health (P)
<input type="radio"/> Emergency Management (E)	<input type="radio"/> Hospital Administrator (Q)	<input type="radio"/> Nurse (N)	<input type="radio"/> Public Works (W)
<input type="radio"/> EMS (S)	<input type="radio"/> Hospital Planner (Z)	<input type="radio"/> Airport Operations (A)	<input type="radio"/> Safety Officer (Y)
<input type="radio"/> Explosive Ordnance Disposal (X)	<input type="radio"/> Governmental/Administrative (G)	<input type="radio"/> Other Health Care (Non-EMS) (C)	<input type="radio"/> Campus (U)
<input type="radio"/> Fire Suppression (F)	<input type="radio"/> Lab Technician (T)	<input type="radio"/> Physician (D)	<input type="radio"/> Public Safety Communications (J)

Professional Background	
(Bubble the <u>ONE</u> item which best describes your background):	
<input type="radio"/> Agency Head (AH) <input type="radio"/> Emergency Responder (ER) <input type="radio"/> Senior Management (SM) <input type="radio"/> Elected Official (EO) <input type="radio"/> Line Supervisor (LS) <input type="radio"/> Volunteer (VO)	

Years of Experience		Experience as Trainer	
(Bubble only <u>ONE</u> from each column):		(If you've had experience as a trainer, please bubble in below):	
In Profession <input type="radio"/> 0 - 3 Years <input type="radio"/> 4 - 6 Years <input type="radio"/> 7 - 9 Years <input type="radio"/> 10 - 12 Years <input type="radio"/> 13 - 15 Years <input type="radio"/> 16 or more Years	In Agency <input type="radio"/> 0 - 3 Years <input type="radio"/> 4 - 6 Years <input type="radio"/> 7 - 9 Years <input type="radio"/> 10 - 12 Years <input type="radio"/> 13 - 15 Years <input type="radio"/> 16 or more Years	<input type="radio"/> Yes <input type="radio"/> No	<input type="checkbox"/> Conduct Training for other Departments/Agencies <input type="checkbox"/> Conduct Training within Department/Agency

WMD Background			
(Bubble in ALL items below which best describe your background):			
<input type="checkbox"/> No prior training/experience	<input type="checkbox"/> At state level	<input type="checkbox"/> Extensive training (5+ courses)	<input type="checkbox"/> Several courses (2-4 courses)
<input type="checkbox"/> At federal level	<input type="checkbox"/> Awareness training	<input type="checkbox"/> Involved in development of agency/jurisdiction WMD plan	<input type="checkbox"/> Work in specialized HazMat or explosive ordnance disposal unit
<input type="checkbox"/> At local level	<input type="checkbox"/> Expert (SME)	<input type="checkbox"/> Serve on WMD Task Force	

Privacy Act Statement

The information requested on this form is protected by the Privacy Act of 1974. The purpose for requesting this information is to enable proper processing of your information for access to the U.S. Department of Energy, Nevada Operations training facilities. Failure to provide the requested information may preclude processing your training request.

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Respirator Medical Evaluation Questionnaire/Waiver Form

Sex: (M/F) F Age: Height: ' " Weight: (lbs.) Boot Size:

☐ Trained to wear a respirator

☐ Trained to wear a Self Contained Breathing Respirator (SCBA)

Medical Conditions

(Bubble in ALL items below that you have now or have ever had)

☐ Cardiovascular Disease

☐ Pulmonary Disease

☐ Smoke Tobacco

☐ Persistent Cough

☐ Heart Trouble

☐ Shortness of Breath

☐ History of Fainting or Seizures

☐ High Blood Pressure

☐ Diabetes

☐ Defective Vision

☐ Sensation of Smothering

☐ Heat Exhaustion

☐ Ruptured Ear Drum

☐ Defective Hearing

☐ Contact Lenses or Glasses

☐ Taking Prescriptions

☐ Problems wearing a respirator

☐ Fear of Tight or Enclosed Places

☐ Other Conditions that might interfere with
respirator use or limit work ability

☐ Please explain any item check:

I verify that I have been seen by a physician/company medical professional and bee approved to wear a respirator FOR TRAINING PURPOSES ONLY for participation in the Bechtel Nevada WMD Training exercises at the Nevada Test Site.
I will take full responsibility in doing so and release Bechtel Nevada from any responsibility.

Student or Medical Representative/Company

Medical Rep. Signature: X _____ Date: ____/____/____

License # _____ Title: _____ Phone: _____

Student Signature: X _____ Date: ____/____/____

Forward application to your state Emergency Management Coordinator. If you have any questions you may call: 702-295-3224.

Applicant's Signature: X _____ Date: ____/____/____

Department Head Signature: X _____ Date: ____/____/____

State Coordinator's Signature: X _____ Date: ____/____/____

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*** Send form to CTOS ***